

REMARKS

Claims 1-3 are all the claims pending in the Application.

The Examiner now rejects claim 1 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,077,686 to Rubinstein (hereinafter “Rubinstein”) and claims 2-3 under 35 U.S.C. § 103(a) as being unpatentable over Rubinstein in view of U.S. Patent No. 5,996,083 to Gupta et al. (hereinafter “Gupta”). Applicant respectfully traverses these rejections in view of the following comments.

A. *Claim 1*

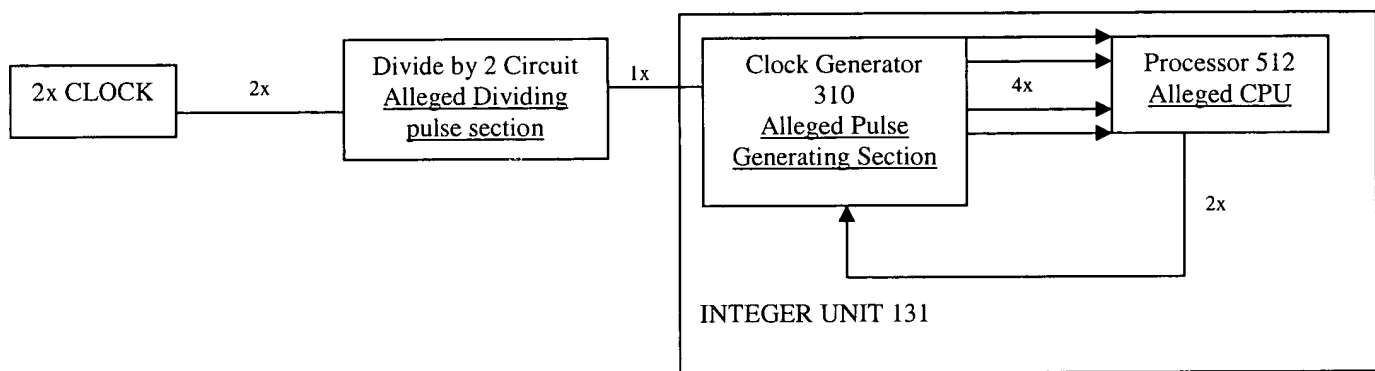
The Examiner rejected claim 1 as being anticipated by Rubinstein. To be an “anticipation” rejection under 35 U.S.C. § 102, the reference must teach every element and recitation of the Applicant’s claims. Rejections under 35 U.S.C. § 102 are proper only when the claimed subject matter is identically disclosed or described in the prior art. Thus, the reference must clearly and unequivocally disclose every element and recitation of the claimed invention.

Claim 1 recites a number of unique features not taught by the prior art. For example, independent claim 1 recites:

a pulse dividing section for dividing the pulse string output from said pulse generating section... and for outputting an interruption request signal...

a central processing unit for executing an interruption processing in response to the interruption request signal output from said pulse dividing section so as to control the output of said pulse generating section.

The Examiner asserts that claim 1 is directed to a programmable controller with a pulse dividing section for dividing the pulse string output from said pulse generating section and a central processing unit executing interruption processing so as to control the output of said pulse generating section and is anticipated by Rubinstein. The Examiner asserts that Rubinstein's divide by 2 circuit and the processor of the integer unit is equivalent to the pulse dividing section and the central processing unit as set forth in claim 1 (see pages 2-3 of the Office Action). In particular, the Examiner's rejection is illustrated in the block diagram below.



Applicant respectfully disagrees with the Examiner. Applicant has carefully studied Rubinstein's discussion of the divide by 2 circuit and the processor of the integer unit, which are not similar to the pulse dividing section and the central processing unit, as set forth in claim 1.

Rubinstein teaches having a clock generation circuit which accepts as an input a clock signal of a first frequency X (the system clock) and provides as an output a clock signal of a second frequency N times X so that when processors with higher speed are placed in the system, there is no need to replace the clock (col. 1, lines 35 to 56; col. 2, lines 10 to 15). In particular, Rubinstein teaches having a clock signal generator distributing a clock frequency signal to a

number of modules, e.g. to a CPU 101 (shown in Fig. 2). The CPU 101 comprises a divide by 2 circuit 211 and an integer unit 131. The frequency division circuit 211 divides the received signal by 2 and outputs the result to the integer unit 131 (col. 4, lines 32 to 46).

Rubinstein's integer unit 131 has a clock generator 310, which multiplies the received frequency and provides four phase-shifted clock signals to the processor of the integer unit 131 (see processor 311 in Fig. 3, which is the same as the processor 512 in Fig. 5). The processor 311/512 provides the clock generator 310/500 with a 2X clock signal for determining whether the 1X clock signal is in phase or out of phase with the clocking signal of processor 311/512 (col. 6, lines 28 to 55).

However, Rubinstein's pulse dividing section 211 teaches dividing the pulse string output from the master clock 2x (ref 201) and not from the alleged clock generator 310. In other words, the pulse dividing section 211 receives a clock signal from the master clock 210 and divides that signal for use in a module such as the CPU. As shown in the diagram above, Rubinstein teaches providing the divided pulse to the alleged pulse generating section. Therefore, if as alleged by the Examiner, the clock section 310 is similar to the pulse generating section as set forth in claim 1, then clearly, Rubinstein fails to teach dividing output signal from the pulse generating section.

Moreover, it is respectfully pointed out that Rubinstein teaches another divide by 2 circuit 513, which is located in the processor 512. However, this divide by 2 circuit is also different from the pulse dividing section as set forth in claim 1. The divide by 2 circuit 513 is in the processor 512 and divides the clock signal of this processor. Moreover, the results of this divide by 2 circuit are outputted back to the clock generation section for phase detection and not to the

CPU. Moreover, this divide by 2 circuit has no interruption request output to the processor by this divider circuit 513. In short, although Rubinstein teaches a number of different divider circuits, Rubinstein fails to teach or suggest a divider circuit as set forth in claim 1.

Next, the Examiner alleges that Rubinstein's processor 512 executes an interruption processing in response to the interruption request signal output from said pulse dividing section. In particular, the Examiner states "element 211-214 supply interrupt signals to the processors 131-134, respectively", see page 3 of the Office Action. It is respectfully submitted that if the Examiner alleges that the processor 131 (which is an integer unit) is the CPU as set forth in claim 1, then Rubinstein fails to teach or suggest a pulse generating section as set forth in claim 1.

On the other hand, if as alleged by the Examiner on page 2 of the Office Action, the processor 311/512 is the alleged CPU as set forth in claim 1, then clearly the CPU does not receive an interruption request signal so as to directly control the output of the pulse generating section. In fact, in Rubinstein, the divided signal is output to the clock generator and is processed in the clock generator (phase shifted, frequency multiplied, etc.) before it is output to the processor. In short, this divided signal is output, processed and used by the clock generator and not the processor. The processor of Rubinstein does not execute an interruption processing.

Therefore, *a pulse dividing section for dividing the pulse string output from said pulse generating section and a CPU for executing an interruption processing in response to the interruption request signal output from said pulse dividing section so as to directly control the output of said pulse generating section* as set forth in claim 1 is not disclosed by Rubinstein, which lacks a pulse divider dividing pulse output from the pulse generating section and which

lacks a CPU which performs interruption processing in response to the interruption request signal from the pulse divider so as to directly control the output of said pulse generating section. For at least these reasons, claim 1 is patentably distinguishable from Rubinstein. Therefore, it is appropriate and necessary for the Examiner to withdraw this rejection of independent claim 1.

B. Claims 2-3

Claims 2-3 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Rubinstein in view of Gupta. This rejection is respectfully traversed with respect to the claims dependent upon claim 1, namely, claims 2-3. It was already demonstrated that Rubinstein does not meet all the requirements of independent claim 1. Gupta is relied upon only for its teaching of the CPU controlling the number of pulses output from said pulse generating section. Clearly, it fails to cure the deficient teachings of Rubinstein. The combined teachings of Rubinstein and Gupta, taken together for what they would have meant to the artisan of ordinary skill, thus fail to meet the requirements of these claims. Therefore, it is respectfully submitted that claims 2-3 are patentable at least by virtue of their dependency on claim 1.

Conclusion and request for telephone interview.

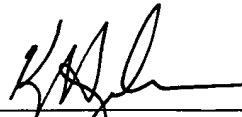
In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly invited to contact the undersigned attorney at the telephone number listed below.

Request for Reconsideration under 37 C.F.R. § 1.111
U.S. Application No.: 09/635,561

Attorney Docket No.: Q60393

Applicant hereby petitions for any extension of time which may be required to maintain the pendency of this case, and any required fee, except for the Issue Fee, for such extension is to be charged to Deposit Account No. 19-4880.

Respectfully submitted,



Kelly G. Hyndman
Registration No. 39,234

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

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